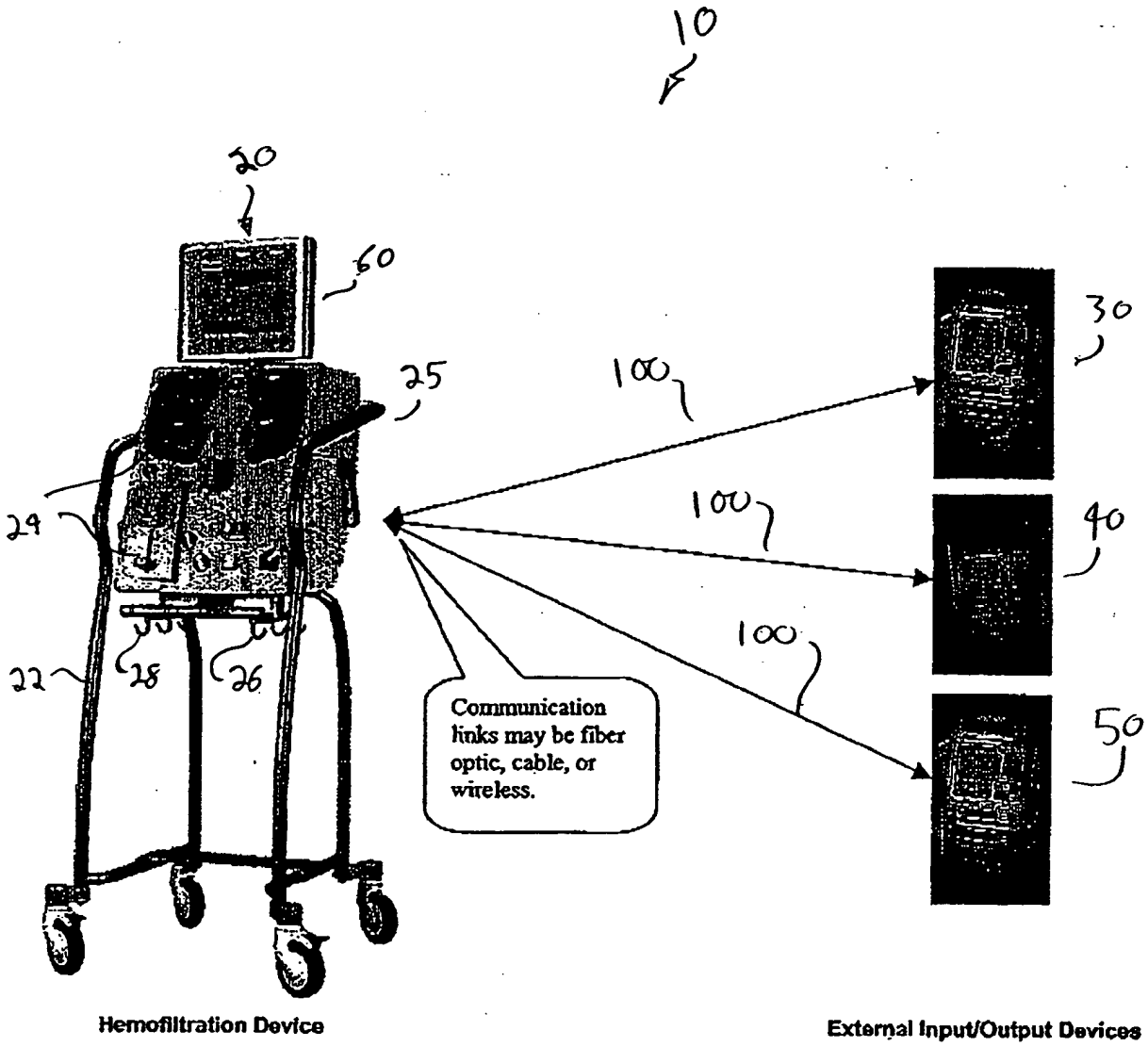

10
20
60
25
29
22
28
26
100
100
100
30
40
50
Communication links may be fiber optic, cable, or wireless.
Hemofiltration Device
External Input/Output Devices

FIG. 1

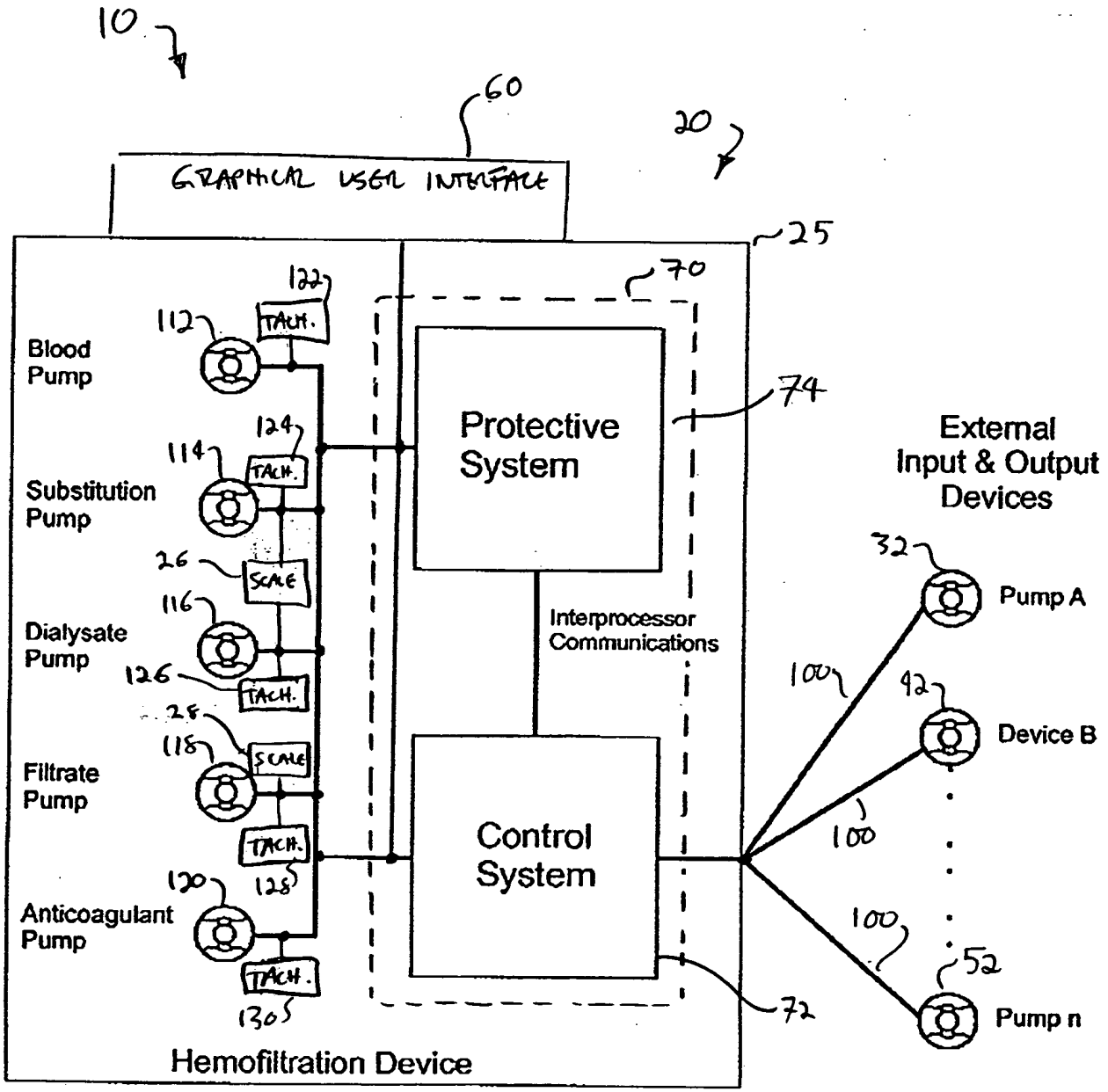
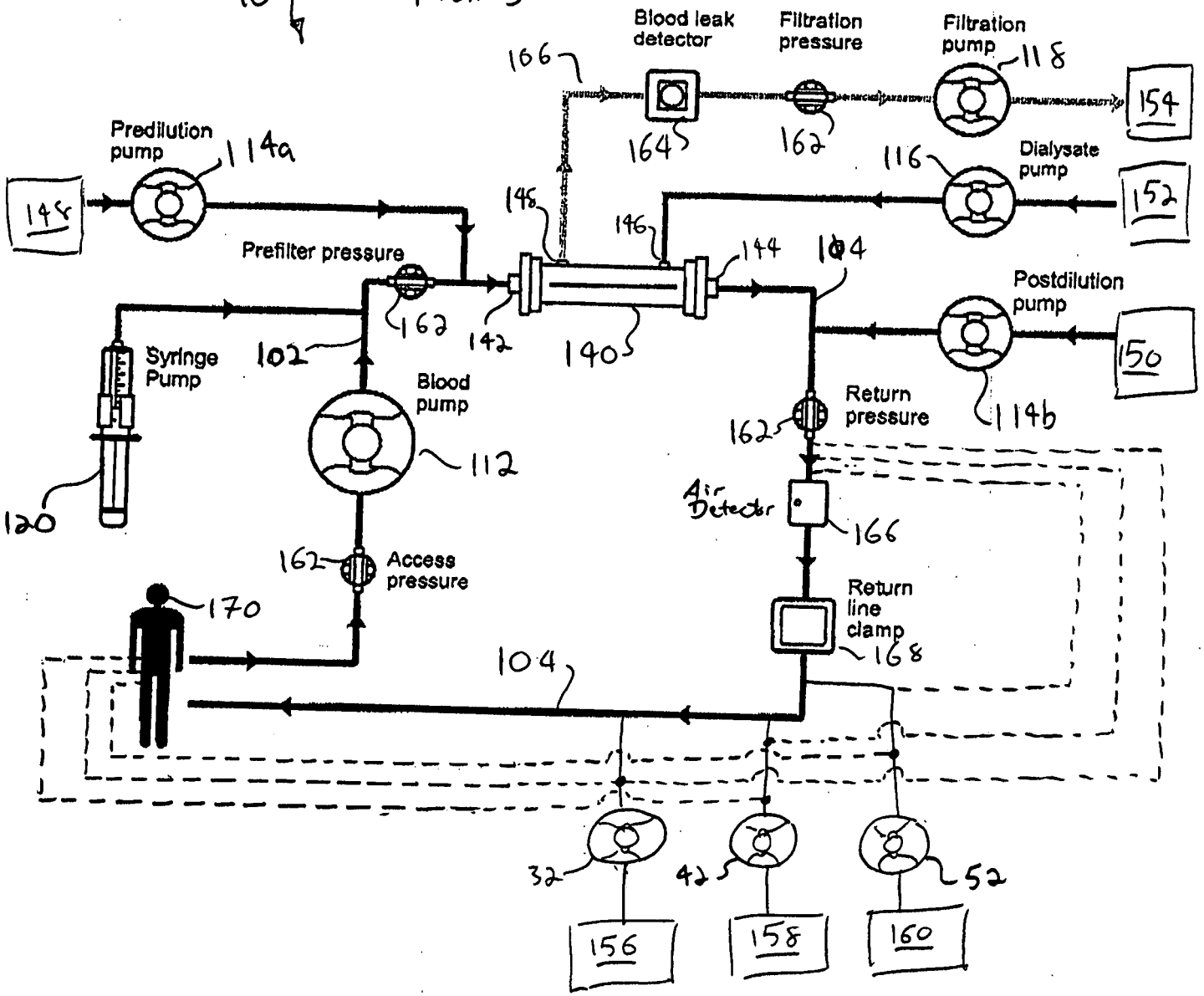

10
60
GRAPHICAL USER INTERFACE
20
25
70
122
TACH.
112
Blood Pump
124
TACH.
114
Substitution Pump
26
SCALE
116
Dialysate Pump
126
TACH.
28
SCALE
118
Filtrate Pump
TACH.
128
120
Anticoagulant Pump
TACH.
130
Protective System
74
Interprocessor Communications
Control System
72
Hemofiltration Device
External Input & Output Devices
32
Pump A
100
42
Device B
100
100
52
Pump n

FIG. 2


107
Fig. 3
Blood leak detector
Filtration pressure
Filtration pump
118
166
154
164
162
Predilution pump
114a
116
Dialysate pump
148
146
144
104
152
Prefilter pressure
Postdilution pump
162
142
140
150
Syringe Pump
102
Blood pump
Return pressure
162
114b
112
Air Detector
166
120
162
Access pressure
Return line clamp
170
168
104
32
42
52
156
158
160

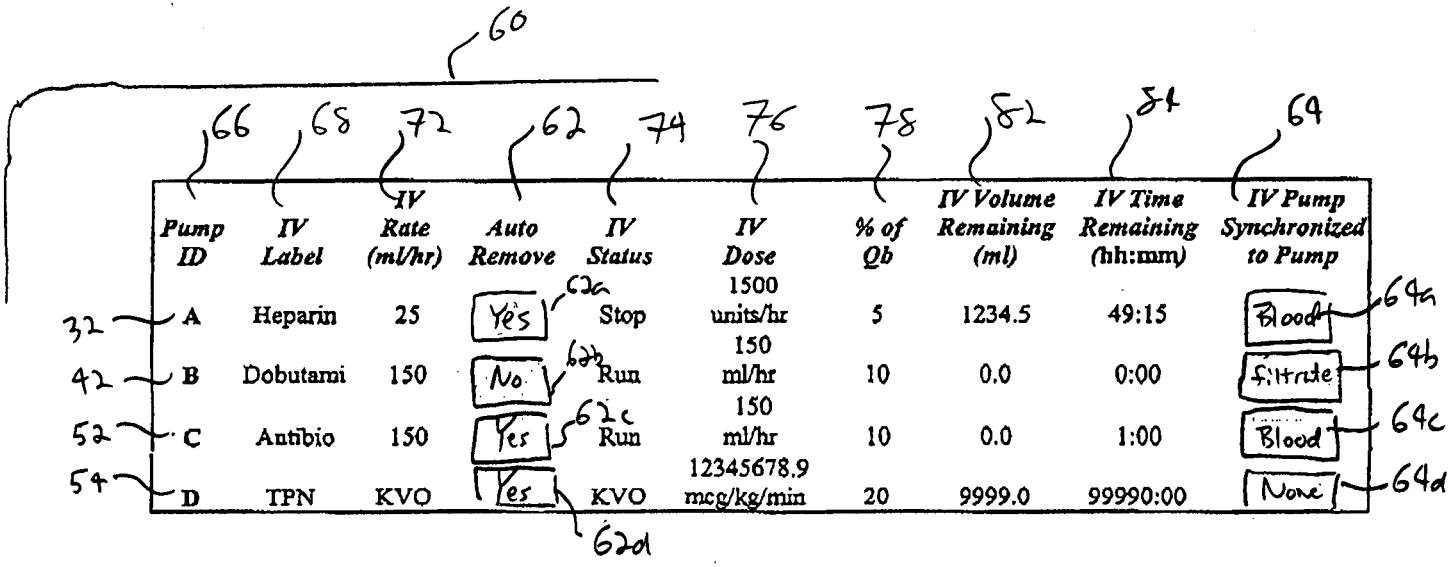

60
66
68
72
62
74
76
78
82
84
64
Pump ID
IV Label
IV Rate (ml/hr)
Auto Remove
IV Status
IV Dose
% of Qb
IV Volume Remaining (ml)
IV Time Remaining (hh:mm)
IV Pump Synchronized to Pump
32
A
Heparin
25
Yes
62a
Stop
1500 units/hr
5
1234.5
49:15
Blood
64a
42
B
Dobutami
150
No
62b
Run
150 ml/hr
10
0.0
0:00
Filtrate
64b
52
C
Antibio
150
Yes
62c
Run
150 ml/hr
10
0.0
1:00
Blood
64c
54
D
TPN
KVO
Yes
62d
KVO
12345678.9 mcg/kg/min
20
9999.0
99990:00
None
64d

Fig. 4

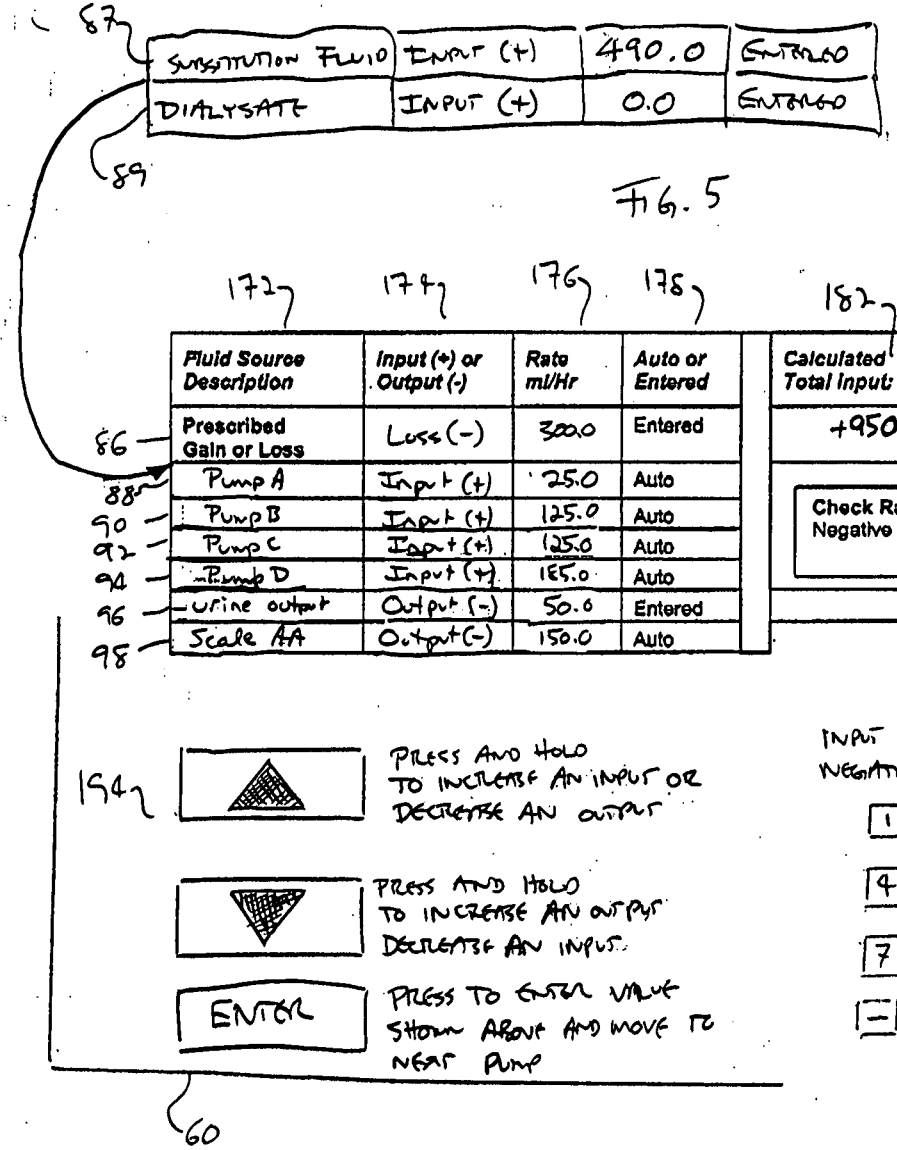

87
SUBSTITUTION FLUID
ENPUT (+)
490.0
ENTERED
DIALYSATE
INPUT (+)
0.0
ENTERED
89
172
174
176
178
182
184
186
Fluid Source Description
Input (+) or Output (-)
Rate ml/Hr
Auto or Entered
Calculated Total Input:
Calculated Total Output:
Calculated Filtrate Pump Rate:
86
Prescribed Gain or Loss
Loss (-)
300.0
Entered
+950
-200 ml/hr
1050 ml/hr
88
Pump A
Input (+)
125.0
Auto
90
Pump B
Input (+)
125.0
Auto
92
Pump C
Input (+)
125.0
Auto
94
Pump D
Input (+)
165.0
Auto
96
urine output
Output (-)
50.0
Entered
98
Scale AA
Output (-)
150.0
Auto
Check Rate Entries:
Negative Filtrate Pump Rate Not Accepted
188
Cancel Values
190
Accept Values
192
194
PRESS AND HOLD TO INCREASE AN INPUT OR DECREASE AN OUTPUT
PRESS AND HOLD TO INCREASE AN OUTPUT DECREASE AN INPUT
ENTER
PRESS TO ENTER VALUE SHOWN ABOVE AND MOVE TO NEXT PUMP
INPUT POSITIVE (GAIN) OR NEGATIVE (LOSS) AMOUNT
196
1 2 3
4 5 6
7 8 9
- 0 +
ENTER
60

FIG. 5